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## ABSTRACT

This paper presents findings of a study that investigated the effects of the peer-assisted leadership program (PAL), a program created at Far West Laboratory, on the networks and professional isolation of educational managers. A one-group pretest-posttest design (Campbell and Stanley 1966) was used to test the hypotheses, which expected that PAL would reduce professional isolation and enhance the extent of informal communication networks. The subjects included 41 educational managers from two school districts in Quebec. The first PAL cohort (1993-94) consisted of 16 managers from a suburban school district. The second group (1994-95) was comprised of 25 managers from a rural district from the northern part of Quebec (Canada). The study used the Echelle de Solitude de l'Universite Laval (ESUL) (De Grace, Joshi, and Pelletier 1993), a validated French version of the UCLA loneliness scale (Russell, Peplau, and Cutrona 1980), to assess isolation. A sociometric questionnaire was also administered to assess subjects' informal networks. Findings indicate that PAL significantly reduced professional isolation without greatly enhancing the extent of participants' communication networks. Two tables are included. (Contains 35 references.) (LMI)

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Effects of the Peer-assisted leadership program  
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two Quebec school districts<sup>1</sup>.

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### Abstract

This paper presents a study that verified the effects of the peer-assisted leadership program (PAL) on communication networks and professional isolation of educational managers. The study uses a one-group pretest-posttest design (Campbell and Stanley, 1966) to test its hypotheses. The subjects are 41 educational managers from two school districts of the province of Quebec, Canada. A first PAL group, from a suburban school district ( $n = 16$ ), followed the program in 93-94. A second group ( $n = 25$ ), from a rural school district of the northern part of Quebec participated in PAL in 94-95. The study uses the ÉSUL (De Grâce, Joshi & Pelletier, 1993); a validated French version of the UCLA loneliness scale (Russell, Peplau & Cutrona, 1980), to assess isolation. It uses a sociometric questionnaire inspired by the ones used by Ibarra (1993), Johnson and Licata (1983) and Licata and Hack (1980) to assess subjects' informal networks. The results indicate that PAL significantly reduces professional isolation without enhancing greatly the extent of communication networks of participants.

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Educational organizations are facing many challenges. They must enhance the quality of their services, ensure that all children are learning, reduce drop out rates and encourage the completion of degrees. The situation calls for improvement and leadership. A large body of studies (Hallinger & Leithwood, 1994; Sweeney, 1982; Edmonds, 1979) highlights the primary role of school leaders on student outcomes in excellent American schools. But as Bossert, Rowan, Dwyer and Lee (1982) concluded, the examination of studies on effective schools suggests that there is not a single style of leadership which can account for excellence. Moreover, their study shows that leaders influence student outcomes through the climate and organization they are contributing to establish. As shown by Brunet, Maduro and Corriveau (1989), such a conclusion seems to apply to the situation in the province of Quebec. Among other things, they found that leadership in excellent primary schools is more versatile than in ineffective schools. If he plays a central role by influencing the outcomes of students, the principal is viewed, in recent trend, as the central person in the development of the school culture (Lee, 1993; Lane, 1992). He contributes also to the development of the school as a learning community (Barth, 1990; Pink, 1983). Consequently, preparation of educational managers for their leadership roles must be taken into consideration.

As in many countries, the only requirement to access principalship in the province of Quebec is the possession of a permanent teaching licence. Thus training and development of educational managers must ensure educational organizations of an effective leadership in schools. Usually, educational organizations let managers choose courses or activities from a list. This kind of

"laissez-faire" organizational culture (Clemmer & McNeil, 1988). Moreover, the situation in which educational managers find themselves can be seen as a barrier to the development of their leadership. They must face challenges even if they are often alone to face them; managing education seems to be a lonely job (Anderson, 1989; Barnett, 1990; Bossert et al., 1982; Laurin, 1989; Lee, 1993). The nature of their working conditions (distance between schools and district, for example) reduces the possibility of interactions with other managers. As Pépin (1986) observed, principals have few meetings with other managers; only 0.07% of their communications involved peers and 1.05% involved superiors. Educational managers are therefore working in isolation of their peer managers and superiors. Informal networks within educational organizations can be viewed as a cause of that feeling of isolation.

Informal networks represent the "central nervous system driving the collective thought processes, actions, and reactions" (Krackhardt and Hanson, 1993: p. 104) of organizations. They can play a key role in organizational functioning (Hellweg, 1983). Studies like the ones performed by Garber (1991), Pépin (1986), Jonhson and Licata (1983) and Licata and Hack (1980) illustrate the lack of development of informal networks of educational managers. This lack of development can explain the professional isolation of educational managers. In turn, this situation can slow their professional development.

The aim of the study reported in this paper is to verify the effect of the Peer-assisted leadership program (PAL); a program created at Far West Laboratory, on professional isolation and the informal network of educational managers. While it is not the purpose of this paper to describe PAL, there are features that

represent a unique blend of content and process. The program does not teach principal specific skills involved in school administration; it teaches them strategies of observation and interviewing that participants use with a peer to collect information (Lee, 1993). The content of the program is cumulative and hierarchical; skills learned in earlier meetings are gradually made more complex which then permits the learning of more advanced skills during later meetings. Its unique features can be responsible for the positive effects it seems to produce.

The effects reported in earlier papers about PAL can be classified in the three repertoires composing the personality according to the psychological behaviorism (Staats & Burns, 1992; Staats, 1975). There is the emotional-motivational repertoire, the language-cognitive repertoire and the sensory-motor repertoire. The emotional-motivational repertoire is composed of all the emotional responses learned by the person (Staats & Burns, 1992). Change can occur in that repertoire as a result of PAL. According to Barnett (1988, 1986, 1985) and Barnett and Long (1986) participating in the program can help principals to clarify their values, change attitudes and reduce their professional isolation. Moreover the language-cognitive repertoire that is implied in activities such as thinking, planning, problem solving, communicating and interacting socially, can also be influenced positively by the participation in the program. In fact, PAL helps principals to build links between theory and practice (Barnett, 1990; Barnett & Brill, 1990), to have a better knowledge of themselves (Barnett, 1990; Mueller & Lee, 1990) and the decision making process (Barnett, 1990). Finally, the program modifies the sensory-motor repertoire of principals by helping them to be better observers, for example. All these effects can produce an impact on principals' daily practice by contributing to the development of their informal network of

communication and relations (Mueller & Lee, 1990; Barnett, 1986). In summary, even though there is only one study that verifies quantitatively the PAL effects (Barnett & Mueller, 1989), results produced suggest lasting positive effects on principals. Moreover, comments from participants and the opinions of experts tend to confirm such results. For example, Levine (1989) stated that PAL is a promising program that creates a context for increasing self-awareness, learning and change. Briefly, PAL seems to be a program that permitted and facilitated communications within the organization. Results obtained by Barnett and Mueller (1989) combined with comments from participants and opinions of experts suggest the following hypotheses: 1) PAL reduces professional isolation, and 2) enhances the extent of the informal networks of communication of educational managers.

## Method

### Subjects

Forty-one educational managers (12 women, 29 men) who are involved in a distance education program designed for them took part in PAL. Their ages range from 24 to 52 years old, with a mean age of 40.87. At the moment of the experiment, they have 10.24 years of experience on average as school administrators. They are divided into two PAL groups. The first group is composed of 16 educational managers from a suburban school board of Quebec, Canada. The second group is composed of 25 educational managers from a rural school board of the northern part of the province of Quebec. There are no significant differences between the two groups concerning factors such as age, experience in management, teaching experience and number of students in their

schools. Subjects have volunteered to take part in the experiment after procedures and goals were presented.

### Design and Procedures

Testing occurred in two sessions, six months apart. A pretest was performed one week prior to the first PAL meeting and a posttest immediately after the final meeting. The one-group pretest-posttest design used presents many rival hypotheses such as history, selection, maturation, testing, instrumentation and interaction of these factors, that can jeopardize internal validity (Campbell & Stanley, 1966). But, as they stated, this design is widely used in educational research and it is judged as better than the one-shot case study.

The independent variable, PAL, is a program composed of six meetings in which a trainer presents and demonstrates theory and skills, furnishes simulated practice, and provides structured feedback and coaching (Barnett, Lee & Mueller, 1987). Usually PAL is a year-long training program but in the present study, its duration was six months; from November to April for the first group and from August to January for the second one.

The dependent variables are professional isolation and the extent of the informal networks of educational managers. The Échelle de Solitude de l'Université Laval (ÉSUL) (De Grâce et al., 1993) was used in the study. It is a French version of the UCLA Loneliness Scale (Russel et al., 1980), the test most frequently used by researchers interested in loneliness. To our knowledge, it is the first time this scale was used in an organizational setting to assess professional isolation. The scale consists of 20 items to which subjects are asked

to respond by indicating "how often you feel the way described" on a 4-point Likert scale of never (1), rarely (2), sometimes (3), and often (4). The maximum score is 80. One modification is made in the direction of the respondents to ensure they are thinking about their situation at the workplace while answering the questionnaire. The statement "At work" is placed at the top of the first item. The psychometric properties of the ÉSUL are similar to those of the UCLA test. For example, coefficients alpha have been found to be ranging from 0.87 to 0.91 for the translation compared to 0.94 for the original version (De Grâce et al., 1993). Furthermore, the test-retest correlation of 0.85 over a period of eight weeks is superior to the one obtained by the original version ( $r = 0.73$ ) (De Grâce et al., 1993).

A questionnaire inspired by the sociometric questionnaires used by Johnson and Licata (1983) and Licata and Hack (1980) was used to assess informal networks of subjects. It asks them to indicate the following: 1) How many colleagues do you contact during a standard work week for advice, information or counsel? 2) How many colleagues contact you during a standard week for advice, information or counsel? and 3) How many colleagues are personal friends? The extent of the information network of a subject is the function of the number of people he contacts during a normal work week and the number of people that contact him during the same period. The extent of the friendship network of a subject is the function of the number of colleagues who are his personal friends.

Hypotheses are tested with paired  $t$  tests, performed on SPSS, using an alpha level of 0.05.



## Results

### Professional Isolation

As predicted, school managers feel less isolated after their participation in the program than before it. In fact, the difference of 2.48 units is significant ( $p < .01$ ) according to the paired  $t$ -test performed ( $t = 2.72$ ,  $df = 40$ ). The PAL seems to have had a positive effect on professional isolation of participants. Table 1 presents result regarding professional isolation.

(Insert Table 1 about here)

### Communication Networks

Two types of networks were assessed in the study. The first one defined as the informational network is the function of the number of colleagues with whom the person communicated (calls placed or received) during a normal work week. The second one is the friendship network which is the number of friends that the person has at work. The results show that participation in PAL did not significantly influence the informational network of subjects. They are not contacted by more colleagues and they do not contact more colleagues during a typical week after PAL than before. In fact, the value of the paired  $t$  test performed ( $t = -1.78$ ,  $df = 37$ ) is not significant at the 0.05 level. However, the partial scores (number of colleagues that I contacted; number of colleagues that contacted me) that composed the informational network score present interesting results. First, the average number of colleagues that subjects contacted went from 4.57 ( $SD = 3.5$ ) at the pretest, to 5.68 ( $SD = 4.3$ ) at the posttest. The paired  $t$  test value ( $t = -1.93$ ,  $p = 0.06$ ) almost encountered the alpha level fixed. Secondly, the mean number of colleagues contacting the subject went from 4.55 ( $SD = 3.3$ ) at the pretest, to 4.8 ( $SD = 2.9$ ), a non-significant gain according to the paired  $t$  test performed ( $t =$

-0.60,  $df = 37$ ). Moreover, the friendship network of participants does not seem to have been influenced by their participation in the PAL program. In fact, the paired  $t$  test value does not approach the alpha level fixed ( $t = -1.05$ ,  $df = 37$ ). Further results show negative correlations between ÉSUL and the number of colleagues that communicated with the subject, ( $r = -.33$ ,  $p < .05$ ) and between ÉSUL and the number of friends at work ( $r = -.37$ ,  $p < .01$ ). Table 2 presents results relevant to communication networks.

(Insert Table 2 about here)

### Discussion

The data relevant to reduction of professional isolation following PAL are congruent with comments from participants (Barnett, 1988, 1986, 1985; Barnett & Long, 1986) and opinions from experts. The program seems to have a positive effect on participants' feeling of professional isolation. According to Barnett et al. (1987), the reactions received lead them to believe that the combination of PAL activities (shadowing, reflective interviewing, theme building, theme diagramming, constructing models and using the general framework of instructional leadership) is responsible for helping educational managers to reduce that feeling.

According to Garber (1991), one way to break professional isolation is to cultivate contacts that make communications flow. We can postulate that the effect of PAL on professional isolation is due to its effects on contacts, in other words, on communication networks. But as shown by the results, even though the extent of the informational and friendship networks is larger after the program, the

differences are non-significant. Regarding the friendship network, the result is not surprising. In fact, we can argue that the development of friendship is a process that demands more interactions than those produced by the program. Otherwise, even if the PAL did not significantly enhance the extent of the informational network, it seems to have produced a positive effect on the number of colleagues that participants call. It seems that participants call more colleagues for advice or information after PAL than before. So we can say that the program can contribute to contacts that make communications flow. In fact, the results obtained do not indicate that the use of these networks has not increased.

Moreover, the study suggests that the ÉSUL is capable of assessing professional isolation even though it has not been conceived for that purpose. The question which arose from the results about professional isolation of educational managers concerned their level of isolation. In fact, at the pretest only, the loneliness score of educational managers seems higher than those obtained by De Grâce et al. (1993) with university students (average score of 37.03 for women and 37.12 for men) and the elderly people (average score of 37.73 for women and 37.44 for men). This result confirms those obtained in previous research (Anderson, 1989; Barnett, 1990; Dwyer, Lee, Rowan & Bossert, 1983; Lee, 1993; Levine, 1989) and suggests that educational managers are indeed experiencing professional isolation. A significant negative correlation was obtained between the number of colleagues who contact others and the loneliness scale. Another similar correlation was shown to exist between the number of friends at work and the loneliness scale. These correlations tend to confirm, in a certain manner, Garber's (1991) proposition to reduce professional

isolation of educational managers by the development of communication networks.

### Conclusion

In summary, results concerning professional isolation confirm the hypothesis of a reduction of participants' professional loneliness as a result PAL. However, the study fails to confirm its second hypothesis about communication networks of participants. Findings suggest, as Barnett and Long (1986) said, that the mere fact of interacting with other school managers makes PAL participants feel less isolated. But results also indicate that PAL did not significantly modify the communication networks of educational managers.

The study presents limitations. First, it does not verify the long-term effects of PAL. Future research should take into account that limitation and verify, for example, if the effect on loneliness lasts over time. A limitation of the study is imposed by its method. In fact, subject selection limits the generalization of its conclusions. Even if the study demonstrates that PAL can be used with French Canadian school managers, we can not argue that the same results would be obtained elsewhere in Quebec. Moreover, future research should try to use multiple measures during PAL to avoid the problem of the long lapse of time between the first and the last measurements (pretest and posttest). Furthermore, it seems important to measure the frequency of use of the network to see if PAL contributes to its development. That way, it will control the fact that the study limits its inquiry to the number of people in the personal network of each subject. Indeed, it is also necessary that new PAL groups be formed in Quebec to ensure cross-cultural validation of the program and the generalization of its results.

Table 1

Analysis of differences between scores of professional isolation (ÉSUL) before and after PAL.

	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t-value</u>
Pretest	41	40.44	8.35	2.72*
Posttest		37.95	7.78	

Note. Maximum score = 80. The higher the score is, the greater the feeling of isolation.

\* $p < .01$

Table 2

Analysis of difference between mean extent of development for informational and friendship networks before and after PAL.

	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t-value</u>
Pretest (Inf.)	38	9.13	5.64	-1.78
Posttest (Inf.)		10.50	6.37	
Pretest (Fri.)	38	2.68	3.23	-1.05
Posttest (Fri.)		3.44	4.91	

Note. Inf.= Informational network; Fri. = Friendship network.

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